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FEDERAL COMMUNICATIONS COMMISSION OFFICE OF SECRETARY

April 19, 1995

EX PARTE

William F. Caton
Acting Secretary
Federal Communications Commission
Mail Stop 1170
1919 M Street, N.W., Room 222
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

Dear Mr. Caton:

Re: GN Docket No. 90-314 Personal Communications Services; ET Docket No. 92-9 - Redevelopment of Spectrum to Encourage Motivation

Today, Jim Tuthill, Senior Counsel, Pacific Bell, and I met with Scott Blake Harris, Chief, International Bureau, Diane Cornell, Chief, Policy Division and Aileen Pisciotta, Chief, Planning and Negotiations Division, International Bureau; and with Rosalind K. Allen, Chief, and David Furth, Deputy Chief, Commercial Radio Division, and Laurence D. Atlas, Associate Bureau Chief, Wireless Telecommunications Bureau, to discuss issues outlined in Attachment A. In addition, Ms. Allen and Messrs. Furth and Atlas were given copies of Attachment B. Please associate these materials with the above-referenced proceedings.

We are submitting two copies of this notice in accordance with Section 1.1206(a)(1) of the Commission's Rules.

Please stamp and return the provided copy to confirm your receipt. Please contact me should you have any questions or require additional information concerning this matter.

Sincerely,

Attachment

cc: Rosalind K. Allen
Laurence D. Atlas
Diane Cornell
David Furth
Scott Blake Harris
Aileen Pisciotta

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ATTACHMENT A

MICROWA VE RELOCATION SHARING THE COSTS OF EXPENSES

PACIFIC BELL MOBILE SERVICES

MULTIPLE PCS LICENSES AUSE INTERFERENCE

A LINK MAY CUT ACROSS SEVERAL FREQUENCY BLOCKS A LINK MAY STRADDLE FREQUENCY BOUNDARIES

■ A LINK MAY CROSS MTA AND BTA BOUNDARIES

PAUL MILGROM'S COST LIARING PROPOSAL

- INTERFERENCE RIGHTS SEPARATE FROM TRANSMISSION RIGHTS (PROPOSED BY JOHN WILLIAMS)
- PCS RELOCATOR ACQUIRES
 INTERFERENCE RIGHTS
- SUBSEQUENT PCS LICENSES PAY A SHARE OF THE UNDEPRECIATED RELOCATION COSTS

DRMULA

INTERFERENCE DETERMINED BY TIA TELECOMMUNICATIONS SYSTEMS BULLETIN 10-F

- COST CALCULATION BASED ON 10 YEAR STRAIGHT LINE DEPRECIATION
- NEW LICENSEE RESPONSIBLE FOR A SHARE OF ONLY THE UNDEPRECIATED PORTION OF THE RELOCATION COSTS

SPECIAL TREATMENT FOR

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PAY SHARE BASED ON AUCTION RULES FOR INSTALLMENT **PAYMENTS**

ATTACHMENT B

MICROWAVE RELOCATION COST SHARING PLAN

In its Third Memorandum Opinion and Order in GEN Docket No. 90-314, the Commission addressed a microwave cost sharing plan presented by PCIA. The Commission recognized that eliminating any "free rider" aspect of microwave relocation was an attractive idea in theory but that PCIA's proposal was not sufficiently developed. The following is a complete proposal for microwave cost sharing which addresses the "free rider" aspect of microwave relocation.

PCS providers are not permitted to cause harmful interference with incumbent microwave users. Thus, they must either engineer their system not to interfere or they must relocate any microwave links with which they interfere. The "free rider" issue arises because several PCS providers may cause interference with the same microwave link.

Several PCS providers may interfere with the same link, partly because of the differences in how microwave and PCS spectrum is allocated and licensed. For example, microwave links cross MTA and BTA service area boundaries. In addition, the channelization is different so that a single microwave link may straddle frequency boundaries between PCS spectrum blocks. A microwave link may also cut across several PCS frequency blocks affecting all of the blocks it passes through. Technical characteristics of the microwave links are also important. A microwave link located entirely in Block B may still suffer interference from Block A, in which case both the A and B Block licensees have an interest in relocating that link. Thus, several PCS providers may interfere with the same microwave link, and they may all benefit from relocating the link.

Without a cost-sharing plan the PCS provider that relocates the link pays the full cost while all other PCS providers that would also interfere with the link receive a free benefit.

Consequently, some PCS providers may take a "wait and see" attitude, hoping someone else will clear the link for them. If too many providers take this posture, PCS could be delayed.

Professor Paul Milgrom assisted us in developing a plan to share microwave relocation costs and thereby to eliminate the free rider problem. The plan is designed to be easily understood and as straightforward as possible in order to avoid disputes and keep administrative costs low. It makes no use of the degree of interference and no attempt to separate premium costs of relocation from standard costs of relocation. Because these factors are so difficult to measure objectively and reliably, using either in the cost sharing formula would result in endless dispute. Instead of separating standard and premium relocation costs, the plan depreciates the costs, so that later entrants bear a smaller share. Another advantage of our plan is that it is based on existing standards and interference criteria.

The centerpiece of the plan is the creation of interference rights that are separate from the microwave transmission rights. Section 94.63 states the interference criteria for private fixed microwave licensees and establishes an obligation not to interfere and a right not to be interfered with. Thus, our plan transfers this right not to be interfered with to the PCS licensee that relocates the microwave link. In other words, although there is no longer any transmission over the link, the FCC database would indicate that a particular PCS provider who migrated the link has the interference rights to that link on a primary basis, as if the link were still operational.

Pursuant to Section 24.237 of the Commission's Rules, whenever another PCS provider begins the required prior coordination notice process, links that have associated interference rights would require compensation if a subsequent PCS provider's system would have caused harmful interference with the link if the link were still operational. Interference would be determined by the criteria set forth in TIA Telecommunications Systems, Bulletin 10-F, "Interference Criteria for Microwave systems, May 1994. Thus, any PCS provider that relocated a link would be entitled to some reimbursement from any other PCS provider that benefits from the removal of the link.

The amount of reimbursement R_N would be calculated using the following formula.

$$R_N = C \times \frac{120 - (T_N - T_1)}{N}$$

C equals the amount paid to relocate the system. N is the number for the interfering PCS provider. (After the link is relocated, the next PCS provider who would interfere would be 2, the next one would be 3, and so on.) T_N equals the number of the month that PCS provider N placed his system in service. T_1 equals the month that the first PCS provider placed his system in service. The month number is one for January, 1995, two for February, 1995 etc. (For example, if the PCS provider that relocated the system placed his system in service in January 1996, T_1 would be 13).

The following is an example of how the formula works. The PCS provider that relocates the link pays \$100 so C = \$100. He places his system in service in January 1996 so T_1

= 13. The next PCS provider puts his link in service in January 1997 so T_N is 25. Since this is the second PCS provider to come into the market, N = 2 So the formula works as follows.

$$R_2 = \frac{100}{2} \times \frac{120 - (25 - 13)}{2} = $45$$

The second PCS provider pays the first PCS provider that relocated the link \$45.

The next PCS provider comes into the market January, 1998.

$$R_3 = \frac{100}{3} \times \frac{120 - (37-13)}{120} = $26.66$$

This amount is paid in equal shares to the preceding PCS providers so each receives \$13.33.

As can be seen, the system is based on 10 year straight line depreciation so that those in service earlier bear a greater share of the cost. An entrant is responsible for a share of only the undepreciated portion of relocation costs as of the day it turns on its service.

Some microwave licensees have regional systems. Those licensees may arrange with a PCS provider to relocate their entire microwave systems, even when the provider is not licensed to provide service in the corresponding area. In such cases, the PCS provider who relocates a link may not be the first to provide service interfering with that link. The PCS provider who is the first to interfere should then be required to acquire the interference right by reimbursing the relocator. The amount of the reimbursement is 100% of the amount paid by the relocator for those links, the removal of which benefit the first service provider.

Depreciation begins only when service is actually initiated. At that point, the PCS provider offering service will become the full owner of the interference rights and will be entitled to

future reimbursement from subsequent PCS providers that benefit from the relocation of the microwave links.

When a PCS provider recognizes that he will interfere with the holder of the interference rights, he must contact the holder of the interference rights and arrange for payment according to the formula. Payments made pursuant to this plan will be put on Public Notice for informational purposes so that all PCS providers entering the market at a later date can be assured that their share of the cost under the formula is appropriate. For example, the third provider coming to market would know that the second provider paid pursuant to the plan and that his share has been reduced accordingly. Use of Administrative Dispute Resolution pursuant to Section 1.18 of the Commission's Rules should be encouraged to resolve any disputes.

Designated entities will be permitted to pay their share of the relocation costs in installment payments along the lines of the auction rules.

This plan offers a simple mechanism to eliminate the free-rider problem and to encourage relocation of a link since the potential for reimbursement exists. However, reimbursement is only required if interference would occur had the microwave link continued to operate. PCS providers who engineer their systems in a way to avoid interference will not be required to pay anything. Consequently, the PCS provider relocating the link has every incentive to bargain aggressively in compensating the microwave incumbent, since he will surely have to bear part of the cost and may even bear the full cost if no other PCS provider benefits from the relocation.

Compliance is automatic since the interference rights are maintained in the FCC database and all PCS providers must perform an interference analysis to demonstrate non-interference (Section 24.237). Enforcement will occur through the proper use of the prior coordination notice process.

In addition, the formula sets a cap on compensation. It doesn't require that the amount calculated by the formula must be paid. Parties have the ability to negotiate lesser amounts. Attached is a chart showing what subsequent providers would pay under our plan with respect to a link that was originally relocated for \$400,000.

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